FAMILY LYCEUM.

PUBLISHED WEEKLY, AT THE LYCEUM PRESS, No. 3, CORNHILL, BY GEORGE W. LIGHT & Co.

VOL. I. BOSTON, SATURDAY, FEBRUARY 2, 1833. No. 25.

FAMILY LYCEUM.

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TERMS: Two dollars a year, in advance. Six copies for ten dollars.

BIOGRAPHY.

JOSEPHINE.

WE have the pleasure of presenting to our readers a sketch of the life of one of the most extraordinary and interesting women contained in the annals of the world, furnished by a lady from a neighboring town. She has often applied her reading to the entertainment of others, as well as of herself, by communications furnished to social circles of neighbors; and we are glad of an opportunity of giving them a still more extended sphere of action and of usefulness, through the medium of our columns. Though this is the beginning, we hope it is but the beginning of contributions from that source.

THE subject of this biographical sketch was of French descent, and born at St. Pierre, the capital of Martinico. Her father's sirname was Tascher, and she seems for awhile to have passed under the name of Marie Joseph Rose Tascher. In what manner it became Josephine does not appear. Soon after her birth her parents removing to St. Domingo, she was left to the care of a maternal aunt. She early exhibited proof of possessing the most brilliant talents, which, united to the loveliness of her disposition and gentleness of manners, rendered her an object of affection and admiration, not only to her aunt, but to the slaves of the plantation.—So remarkably sweet was her voice, that Napoleon, while speaking of his reception by the French, remarked, that their first applause sounded to his ear sweet as the voice of Josephine. Her situation precluded a regular education, but the affection of her aunt provided her with every accomplishment attainable. She excelled in music, and her graceful and aerial form often mingled with the tawny slaves in the evening dance; she delighted to mingle in their pastimes, and familiarly to sympathize in their joys and sorrows.

One morning, while taking her usual walk, she observed a circle of young slaves surrounding an aged woman, who seemed in earnest conversation. She immediately approached, and joining the party, ascertained that she was telling their fortunes. 'Almost by force,' to use her own words, the old sybil seized the hand of Josephine under the greatest agitation. Amused at the absurdity, Josephine exclaimed, 'What read you concerning me in futurity?' 'What do I see in futurity? You will not believe me if I speak.' 'Yes, indeed, I assure you. Come, my good mother, what am I to hope and fear?' 'On your own head be it, then. Listen—You will be married soon; that union will not be happy; you will become a widow, and then—and then you will be Queen of France!—Some happy years will be your's, but you will die in a hospital, amid civil commotion!'

Shortly after this, Viscompte Alexander de Beauharnais happening to visit Martinico, saw the beautiful Josephine, and being in his own person and manners prepossessing, the attachment was mutual, and she became the wife of Beauharnais. Accompanying him to France, she shone as the most brilliant star in the fashionable circle of titled nobility, attracting universal admiration, not for beauty and sweetness of manners alone, but for that affability which she seemed still to retain, although her circumstances might naturally be expected to produce a change in the feelings of one who had been educated far from the influences of piety and true benevolence. In the society of one so beloved, enlivened by the playfulness of two promising children, everything promised happiness to Josephine; but her sunshine was doomed to be clouded: for though Beauharnais to energy and nobleness of character united many generous and amiable qualities, and though his attachment to Josephine was sincere, yet being a man of dissolute habits, and destitute of a just sense of moral obligations, he cruelly suffered his affections to be drawn from her, bestowing on another those attentions which constituted her happiness. The unhappy Josephine remonstrated in vain, and finally, by a mutual consent, it would seem, rather than a regular divorce, they separated, and she with her children returned to Martinico, and found once more an asylum under the hospitable roof of her loved aunt. Here she remained until the agitations in France rendered it necessary for her to return on account of family affairs, and besides, fearing for her still beloved Beauharnais, she hastened to be near him, and reconciled if possible, that she might influence him, and check his hasty zeal in his country's cause. It was with difficulty that she provided an outfit for herself and family; and an anecdote of her voyage, related by herself, tends to show not only the extreme poverty to which she was reduced, but the gratitude and tender sensibility of her heart. 'Hortense,' says she, 'obliging and lively, performing with much agility the dances of the negroes, and singing their songs with surprising correctness, greatly amused the sailors, who, from being her constant playfellows, had become her favorite society. No sooner did she observe me to be engaged, than, mounting upon deck, and there the object of general admiration, she repeated all her little exercises to the satisfaction of every one. An old quartermaster was particularly attached to the child, and whenever his duties permitted him a moment's leisure, he devoted the interval to his young friend, who in turn doated upon the old man. What with running, leaping, and dancing, my daughter's slight shoes were fairly worn out. Knowing she had not another pair, and fearing I would forbid her going on deck, should this defect in her attire be discovered, Hortense carefully concealed the disaster; and one day I experienced the distress of seeing her return, leaving every footmark in blood.—Fearing some terrible accident, I asked in affright, if she was hurt? 'No, mama.'—'But see, the blood is streaming from your feet.' 'It is nothing, I assure you.' Upon examining how matters stood, I found the shoes literally in tatters, and her feet dreadfully torn by a nail. We were not yet more than half-way; and before reaching France it seemed impossible to procure another pair of shoes. I felt quite overcome at the idea of the sorrow my poor Hortense would suffer, as also at the danger to which her health might be exposed by confinement in my miserable cabin. We began to weep bitterly, and found no solace in our grief. At this moment entered our good friend the quartermaster, and with honest bluntness inquired the cause of our grief. Hortense, sobbing all the while, eagerly informed him that she would no more get upon deck, for her shoes were worn out, and mama had no others to give her.' 'Nonsense,' said the worthy seaman, 'is that all? I have an old pair somewhere in my chest; I will go and seek them. You, madam, can cut them to the shape, and I'll splice them up again as well as need be. Shiver my timbers! on board ship you must put up with many things;—we are neither landsmen nor fops, provided we have the necessary; *that's the most principal!*' 'Without giving time to reply, away hastened the kind quartermaster in search of his old shoes. To work we set with all zeal, and before day closed, my daughter could resume her delightful duties of supplying their evening's diversion to the crew.' This gift, says Josephine, afforded me greater pleasure than all the presents I ever received; and it has often been a matter of self-reproach, that I did not particularly inquire into the name and history of our benefactor, for it would have been gratifying to have done something for him, when afterwards means were in my power.

[To be continued.]

CARDINAL WOLSEY.

THOMAS WOLSEY was born at Ipswich in Suffolk, in 1471. He was not the son of a butcher as reported, but descended from a poor family, and he entered so early at Oxford, that he was Bachelor of Arts at fourteen, and consequently called the boy bachelor.—He became fellow of Magdalen college, and exchanged the care of Magdalen school for the tuition of the sons of the Marquis of Dorset. He obtained the rectory of Lymington in Somersetshire, but here he was so irregular, that he was set in the stocks for being drunk on a Sunday, by Paulet, a punishment severely visited on the magistrate by a long imprisonment, when the offending clergyman was in power. After the death of Dorset he was noticed by Dean, archbishop of Canterbury, and became chaplain to the king, by whom he was entrusted with the negociation of his marriage with Margaret of Savoy.—He used such despatch in this business, that he was rewarded with the deanery of Lincoln. The death of Henry VII. proved no obstacle to his further promotion; for Fox, bishop of Winchester, fearing to be supplanted in the favor of the new king, Henry VIII., by the earl of Surrey, introduced Wolsey to him, as a person well qualified to obtain his confidence. He acted his part so skilfully in this situation, enlivening by his unrestrained gaiety the young king's hours of pleasure, and introducing at proper times matters of business, in which he insinuated into his mind jealousies of the authority of his father's ministers, that he shortly acquired the first place in the royal favor, and became uncontrolled minister. His advancement was rapid. He was brought, in 1510, into the privy council, was made reporter of the star-chamber, and registrar, and afterwards chancellor of the garter; ecclesiastical preferments were profusely accumulated upon him, of which the principal were the bishoprics of Tournay and Lincoln in 1513, and the archbishopric of York in 1514. In 1515, the pope, in order to secure in his interest a person so high in his master's good graces, elevated him to the dignity of a cardinal. Naturally proud and ostentatious, it is no wonder that this tide of fortune carried him beyond the bounds of moderation. No English ecclesiastic ever took so much state upon himself. He had a train of 800 servants, many of whom were knights or gentlemen. Even some of the nobility sent their sons into his family for education, and did not disdain to pay their court by suffering them to act as his menials. His equipage and furniture were of the most costly kind; and he not only wore silk and gold in his own habits, but decorated his saddles and the trappings of his horses with them. A tall priest bore before him a silver pillar surmounted with a cross; and his cardinal's hat was carried by a person of rank, and in the king's chapel was reposited nowhere but upon the altar.—It was the best part of his magnificence that he was a generous patron of men of letters, and a promoter of learning as well by public institutions, as by private bounties. His power and self-consequence were much enhanced by being nominated the pope's legate *a latere*, which gave him legal pre-eminence over the archbishop of Canterbury, and supreme authority in all church affairs. He had already usurped upon the primate Warham's dignity, by bearing his cross aloft in the province of Canterbury. He now complained of Warham's presumption for styling himself in a letter, 'Your loving brother;' which offence being mentioned to that respectable prelate, he said, 'Know ye not that this man is drunk with too much prosperity?' Warham, soon after, tired of contention, resigned his office of high chancellor, to which Wolsey was appointed in December, 1515. To these favors were added the confidence of the king, and consequently the disposal of all places of trust and power in the kingdom. Thus, at the head of affairs, he governed the nation at his pleasure, and that he might confirm more strongly his ascendancy over the king, he withdrew his attention from public affairs, and fanning his pleasures, administered liberally to the gratification of his most licentious desires. Absolute at home, where his expenses exceeded the revenues of the crown, he was flattered by foreign princes, and according to his caprice or avarice, the support of England promised to favor either the views of France, or of Germany, or of the pope. His disappointment in his application for the popedom after Leo X., in which he was deceived by the emperor, was followed by the displeasure of his master, who in the matter of his divorce, expected from him an obsequious assistant. The cardinal, afraid of the pope and the king, wished to stand neuter, but Henry, indignant at this, stripped him of his honors in 1529. At the same time he was ordered to quit York-place, a palace which he had built in London, and which afterwards became a royal residence under the name of Whitehall. All his rich furniture and plate was seized to the king's use, and he was directed to retire to Esher, where he possessed a seat as bishop of Winchester. Wolsey was stunned with the blow, which fell upon him as on one who had no resource of magnanimity within himself, and whose loftiness of mind was merely the result of high fortune; and on a gleam of returning favor, conveyed in a gracious message from the king, accompanied with a ring, he was so much transported with joy, that being on horseback when the messenger met him, he threw himself on his knees in the dirt, and in that posture received the tokens of his master's remembrance. But in that servile age such meanness was universal. Notwithstanding this fit of capricious fondness, the king ordered him to be indicted in the star-chamber; and then abandoned him to the rigor of the parliament. The House of Lords drew up an accusation against him, consisting of 44 articles, which being sent to the Commons, Thomas Cromwell, whom the cardinal, from a low condition in his service, had raised to an elevated station, defended him with so much vigor, that his enemies were baffled. They therefore adopted the measure of indicting him upon the statute of provisors, passed in the reign of Richard II., which forbade the procuring of bulls from Rome, and which he had violated by obtaining the legatine power; and though he had exercised it with full approbation of the king, it was made the ground of a sentence, putting him out of the king's protection, forfeiting all his lands and goods, and declaring him liable to imprisonment. After the intended effect was produced, of making him resign to the king York-place with all its furniture, a very full pardon was granted him for past offences of every kind, and the revenues of his archbishopries, with part of his goods, were restored to him. In 1550, he was ordered to remove to his diocese of York, where he passed part of the year at his mansion of Cawood, exercising hospitality, and ingratiating himself by his assumed affability with the neighboring gentry. For what reason the king renewed his hostility towards this humiliated minister, and resolved to proceed to extremities with him, is not very apparent; but his determination to keep no measures with the pope, and to remove every obstacle against an open breach with the see of Rome, is alleged as the most probable cause. The earl of Northumberland received an order to arrest the cardinal for high treason, and conduct him to London for trial. This was executed in the end of October, and on November 1st he set out under custody upon his final journey. Indisposition of body, conspiring with mental distress, reduced him to such a state of debility, that he was obliged to stop at Worcester, where he was honorably received in the abbey.—The pathetic language of Shakspeare represents him as saying on entrance,

> O father abbot
> An old man, broken with the storms of state,
> Is come to lay his weary bones among ye;
> Give him a little earth for charity!

His disorder gaining upon him, a few days brought him to his end, in the sixtieth year of his age. He expired 29th Nov. 1530, and a few hours before his death he exclaimed in agony, 'had I served my God with the same zeal that I have served the king, he would not have forsaken me thus in my old age.' The history of Wolsey shows, in a striking degree, the vicissitudes of fortune. His private character was so depraved, that he deserved little of the favor of his master. It has been truly observed, that few ever fell from so high a station with less crimes objected against them. It must be acknowledged that he was a man of abilities, well acquainted with the learning of the times, sagacious as a politician, and well versed in the intrigues of courts. Notwithstanding, however, his vices and his ambition, his schemes for the promotion of literature were noble. He not only founded seven lectures at Oxford, but Christ-Church owes its greatness to his munificence. He also founded a school at Ipswich. Among his honors he possessed the commission of pope's legate *a latere*, he was abbot of St. Alban's, bishop of Winchester and Durham, and he held in farm the dioceses of Bath, Worcester, and Hereford.—[*Platt's Universal Biography.*

MYTHOLOGY.

MYTHOLOGY is the history of the fabulous gods and heroes of antiquity, with the explanations of the mysteries or allegories couched therein. Lord Bacon thinks, that a great deal of concealed instruction and allegory was originally intended in most part of the ancient mythology. He observes, that some fables discover a great and evident similitude, relation, and connection, with the thing they signify, as well in the structure of the fable, as in the meaning of the names whereby the persons or actors are characterised.

The same writer thinks it may pass for a further indication of a concealed and secret meaning, that some of these fables are so absurd and idle in their narration, as to shew an allegory even afar off; but the argument of most weight upon this subject he takes to be this, that many of these fables appear by no means to have been invented by the persons who relate them. He looks on them not as the product of the age, nor invention of the poets, but as sacred relics, as he terms them, gentle whispers, and the breath of better times, that from the tradition of more ancient nations came at length into the flutes and trumpets of the Greeks.—[*Dictionary of Arts and Sciences.*

Integrity.

The first great maxim of human conduct, that which it is all important to impress on the understanding of young men, and recommend to their hearty adoption, is, that in all circumstances, and under every emergency, to preserve a clean heart, and an honest purpose. Integrity, firm, determined integrity, is that quality which, of all others, raises man to the highest dignity of his nature, and fits him to adorn and bless the sphere in which he is appointed to move. Without it, neither genius nor learning, neither the gifts of God, nor human exertions, can avail aught for the accomplishment of the great objects of human existence. Integrity is the crowning virtue, integrity is the pervading principle which ought to regulate, guide, control and vivify every impulse and action. Honesty is sometimes spoken of as a vulgar virtue, and perhaps that honesty, which barely refrains from outraging the positive rules ordained by society for the protection of property, and which ordinarily pays its debts and performs its engagements, however useful and commendable a quality, is not to be numbered among the highest efforts of human virtue. But that integrity which, however tempting the opportunity, or however secure against detection, no selfishness nor resentment, no lust of power, place, favor, profit or pleasure, can cause to swerve from the strict rule of right, is the perfection of man's moral nature. In this sense, the poet was right, when he pronounced 'an honest man the noblest work of God.' It is almost inconceivable what an erect and independent spirit this high endowment communicates to the man, and what a moral intrepidity and vivifying energy it imparts to his character. There is a family alliance between all the virtues, and perfect integrity is always followed by a train of goodly qualities, frankness, benevolence, humanity, patriotism, promptness to act, and patience to endure. In moments of public need, these indicate the man who is worthy of universal confidence. Erected on such a basis, and built up of such materials, fame is enduring. Such is the fame of our Washington, of the man 'inflexible to ill and obstinately just.' While, therefore, other monuments, intended to perpetuate human greatness, are daily mouldering into dust, and belie the proud inscriptions which they bear, the solid granite pyramid of his glory lasts from age to age, imperishable, seen afar off, looming high over the vast desert, a mark, sign and a wonder, for the way-farers through this pilgrimage of life.

A nice sense of integrity, therefore, cannot be too early cherished, or too sedulously cultivated. In the very dawnings of life, occasions are presented for its exercise. Within these walls, temptations every day occur, where temporary advantage solicits a deviation from the rule of right. In the discharge of the various duties which you owe to your companions, let no petty selfishness be indulged, no artifices practised, by which you are to escape from your fair share of labour, inconvenience or contribution, or any one deprived of the full measure of whatever he may rightfully claim. Cultivate singleness of purpose and frankness of demeanor, and hold in contempt whatever is sordid, disingenuous, cunning or mean. But it is when these peaceful shades shall have been left behind, and the fitful course of busy life begun, that seductions will be presented under every form by which inexperience, infirmity of purpose, and facility of disposition, can be waylaid. Then is the crisis of the young man's fate—then is the time to take his stand, to seize his vantage ground. If he can then defy the allurements of cupidity, sensuality and ambition, the laugh of fools, the arts of parasites, and the contagion of improbity; then indeed, may he hope,

> 'In sight of mortal and immortal powers,
> As in a boundless theatre to run
> The great career of justice—
> And through the mists of passion and of sense,
> And through the tossing tide of chance and pain
> To hold his course unfaulterable.'

[*Gaston's Address.*

Brain and Nerves.

The organs of the animal functions, which keep up the connection between the body and the faculties of the mind, and are therefore found only in animated organised bodies, may be conveniently divided into two classes; the sensorium, and the nerves; the latter including the nerves and their origins from the brain; the former comprehending the rest of the cerebral organ, by which the offices of the nerves are connected with the more noble part of our frame, the faculties of the mind; and which may therefore not unaptly be termed the organ of the mind; since it is by it that the mind combines and compares its perceptions, and draws inferences from them; in short, by which it reflects and thinks.

The brain, when brought into view by a removal of the cranium, presents a double motion; it rises slightly during expiration, and subsides again when the thorax is dilated. This is explained from the temporary obstruction which the return of the venous blood experiences when the lungs are compressed. But a more conspicuous elevation and depression of the cerebral surface arises from the impulse of blood into the arteries of the head: this motion is therefore perfectly synchronous with the pulse, and may be felt in every infant whose fontanelle is not closed. The quantity of blood received by the brain is very considerable; according to Haller's calculation, between two-thirds and a half of the whole mass of blood that enters the aorta. This blood is circulated through all the minute and numerous arterial ramifications of the pia mater, before it enters the brain, as it should seem, in order to diminish its impulsive force; it rises contrary to its gravity, and its conducting tubes have an angular and tortuous course before they branch out on the pia mater; which circumstances augment the retarding effect. Every thing, on the contrary, facilitates the blood's return, and prevents venous distension.

The vast and wonderfully complicated vascular apparatus of the brain, and the large proportion of blood sent to the organ, naturally lead us to expect, that this part and the heart are closely dependent on each other. If the cerebral arteries be all tied, the animal perishes instantly. The influence of the heart, essential to the preservation of life, does not seem to consist so much in the agitation which the cerebral arteries communicate to its substance, as in the effect which the arterial or the oxigenized blood exerts on it. For if venous blood be sent into the head, instantaneous death ensues; and this seems to be the way in which the cessation of respiration, by drowning, hanging, &c. proves fatal.

Physiologists have endeavored to trace the termination of nerves in the organs which they supply; but the research is almost too subtle for our imperfect modes of investigation. In some instances, as the optic and auditory, they are manifestly resolved into a soft pulp; and we conjecture by analogy, that the same mode may obtain in others.

That the sensible impressions made on our organs are conveyed by the nerves to the brain; and that the latter part is the seat of the sensation, although it is referred by the mind to the part itself; is proved by cutting or tying a nerve: in which case the usual impression causes no perception.—The truth of this assertion, which will hardly meet with credit among the uninformed, is illustrated by what happens to persons whose limbs have been amputated: they are constantly complaining of pains in the toes or fingers of the limbs they have lost. Here the middle of the nerve is irritated, but the pain is referred by the mind to its extremities.

That the nerves are the medium of connection between the mind and its organs, is clear; but how their offices are performed is a much more obscure question. It has occupied the attention, and engaged the experiments of physiologists, in all ages; but nature has not hitherto lifted the veil, and the subject remains nearly in its original obscurity. An oscillatory or vibratory motion of the nerves, or a nervous fluid contained in or adhering to these organs, have been assumed in explanation of the facts. According to some, the latter is a liquid contained in tubes; while others liken it to caloric, light, oxigen, the electric or magnetic fluids.

The curious and complicated structure of the brain has led some to suppose, that particular powers resided in certain eminences or depressions of the brain; and this is the foundation of the peculiar notions of Dr. Gall, whose speculations have attracted so much notice. He contends, that the inequalities of the brain's surface are the seat of the mental powers, and of the various propensities, &c. of the human species; and that these are accompanied by corresponding irregularities of the skull, discernible by external inspection.

There are some other topics which might have been noticed before quitting this subject; but as our object has been throughout the volume to excite a desire for farther information on the subjects which it embraces, rather than to satiate the reader with any one of them, enough we trust has been said to render the book and its title consistent with each other.—[*First Lines of Science.*

Civilized Indians.

In the year 1803, the Quakers made the experiment of introducing habits of industry among the Senneca Indians, as one of the first steps towards their civilization. In 1806, three of the committee having charge of Indian concerns, were appointed to pay the Indians a visit, in order to see what improvements they had made in the preceeding three years. 'We set out,' says one of the committee, who furnishes this account, 'on the first of the 9th month; arrived about the middle of the same, and found the Indians mostly at home, employed in useful labor. In passing aleng to the settlement formed by the committee at Tunessassa, I was astonished at the improvements made by the Indians within the last three years; for notwithstanding my very sanguine expectations, they had considerably exceeded in labor and attention, any opinion I had formed. The aspect of things were truly pleasing, indicating increasing industry and economy, and very encouraging to us, as proofs that our labors have not been in vain. Even the roads opened by them are extremely well made, being much superior to those we observed among the frontier white inhabitants. They had erected nearly one hundred new houses since my last visit, most of them two stories high, and well put up with hewn logs, very perpendicular at the corner, and nicely fitted together. Some have panelled doors and stone chimneys, and a great many of them glass windows. Their farms are enclosed under good fences from seven to ten rails high; and there is a much greater proportion of corn planted this season than has been known before, and it generally looked well. The buildings are, with little exception, their own work; their ingenuity in some of the mechanic arts, being equal to their industry in agricultural pursuits.

'It is a peculiar satisfaction to find, that one effort of the endeavors of the Society of Friends with these people, has been a diminution of labor on the part of the females in the corn-fields, &c.; for in their former savage state, they appear to have been consigned to slavery in the field, the procuring of wood, and many other hardships; the men seldom if ever assisting them. But notwithstanding the women now labor less in the field, they are not idle. Some of them have been taught the art of making soap, in order to promote cleanliness, and others have learned to spin and knit. But the men and the women were much more cleanly in their persons, clothes, and houses, than at the time of our last visit.

'It is very remarkable that the Indians among whom we have endeavored to promote the arts of civil life, have very generally abandoned the use of ardent spirits; population is evidently increasing with them, from this change in their way of life. They appeared to enjoy good health; and it is manifest, that there is in the natives an encouraging improvement in agriculture and some of the mechanic arts, as well as in the regularity of their lives and manners.'—[*Percy Anecdotes.*

Germination.

When a seed is placed in a situation favorable to vegetation, it very soon changes its appearance; the radicle is converted into a root, and sinks into the earth; the plumula rises above the earth, and becomes the trunk or stem. When these changes take place, the seed is said to germinate; the process itself has been called germination, which does not depend upon the seed alone; something external must affect it. Seeds do not germinate equally and indifferently in all places and seasons, they require moisture and a certain degree of heat, and every species of plant seems to have a degree of heat peculiar to itself, at which its seeds begin to germinate; air also is necessary to the germination of seeds; it is for want of air that seeds which are buried at a great depth either thrive but indifferently, or do not rise at all. They frequently preserve, however, their germinating virtues for many years within the bowels of the earth; and it is not unusual, upon a piece of ground being newly dug to a considerable depth, to observe it soon after covered with several plants which had not been seen there in the memory of man. Light is supposed to be injurious to the process, which affords a reason for covering seeds with the soil in which they are to grow, and for carrying on the business of malting in darkened apartments; malting being nothing more than germination, conducted with a particular view.—[*Dictionary of the Arts and Sciences.*

Co-operation.

The Lyceum system in all its objects and departments is a system of co-operation—of helping each other—of doing good to each other—enlightening each other—of elevating each other—of dignifying each other—of blessing each other.

It aids members of the same family in acting towards each other with the tenderest affections, the most enlightened and liberal minds, and the most elevated moral and religious principle. It enables neighbors to aid each other—not only in their intellectual and moral interests, but in their various pursuits of business. Citizens of the same town, by adopting the Lyceum principle of co-operation and good will, may greatly promote the interests of each individual, and consequently of their whole community. Towns in the same county or vicinity, may in a thousand ways, aid each other in a thousand objects by the system of co-operation contemplated by Lyceums. States, kingdoms and empires, may do much to promote each others prosperity by a course of liberal co-operation in those great business, intellectual and moral objects, which are alike important to all.

All the different departments of society, can not only aid their brethren in the same profession, but those of different professions can render the most important services to each other by measures for friendly mutual intercourse, and reciprocal efforts. Children can help children, parents can aid parents, teachers can enlighten, encourage and animate teachers, farmers can assist farmers, mechanics can sustain and encourage mechanics, by a liberal and friendly course of co-operation.

Not only so, but children, parents, and teachers, can warm, strengthen, and animate each other, in the great work of intellectual and moral culture, alike important, and alike instructing to all. The farmer also, can help the mechanic, and the mechanic the farmer, in their mutual and separate interests.

The city can hold out many facilities to the country villages, and the villages pay in full for the favors received.

Seamen can enter, most successfully into this system of co-operation, proposed by the Lyceum. They can render the most important aid in collecting cabinets of natural and artificial productions for City Lyceums, and through them, for the Lyceum of every village throughout the country. In return, the seamen can be furnished with a place of resort, and of instruction, at the Lyceum of every port he enters, where he will be able to communicate and receive civilities alike interesting and dignifying to them and to human nature.

And what object cannot be promoted by a system of co-operation among the different classes and departments of society? Would it not be easy, by such a plan to improve every school in our land, and to establish schools in many regions now destitute of every means of intellectual and moral culture?

Many of the benevolent Societies, such as Bible, Missionary, and Colonization Societies, might, either directly or indirectly, co-operate with Lyceums, in advancing the common good of mankind. By adopting the Lyceum principle of co-operation at Liberia, the colonization society might enlighten, civilize and christianize the whole of Africa.

By the same principle put into operation by Missionary Societies, or other friends of the Indians, all the tribes west of the Mississippi, and in our country, might almost immediately enter upon the work of *self education*, while they retained the wandering life of savages. They cannot at once step from the character and notions of savages; but they can, at any moment, when the proper means are presented to them, *begin* to cultivate their minds and hearts. The first step can be taken this week, and the second, next, in the work of enlightening and civilizing these minds of the forest.

Would it not be easy to give family education a new and more elevated character? Might not mothers, by aiding each other, more fully realize, and more successfully fulfil, the responsibilities and the duties of their high and holy charge? Might not the numerous benevolent objects already so successfully carried on by Ladies' Associations, which are the glory of the present age, be still more fully attained by a general system of co-operation?

How easy it would be for the members of schools and lyceums throughout the country, by a united effort, to furnish every village, every school-room, and every family, from Canada to Mexico, and from the Atlantic to the Pacific, with a cabinet of natural and artificial productions?

What art might not be advanced, and what artist might not be benefitted, if all classes and departments of society should aim to aid and co-operate with each other? Might not every farmer and mechanic receive aid

from the books, apparatus, and other collections made at Lyceums, by the united efforts of city and country, seamen and landsmen, the learned and unlearned, the scholar and the operator? What man, woman, or child upon our globe might not co-operate with other men, women, and children, for the benefit of each, and for the general cause of education and religion, for the cause of humanity, for the cause of a world, for the cause of a universe?

TO AMERICAN CHILDREN.

We can hardly ask or wish a greater favor than the co-operation of the four million of American children. By the aid of such an army, any conquest can be gained, any obstacles can be overcome, and any object accomplished, which may be desirable, for themselves, for our nation, or for the world.

And why not? Have they not physical strength enough, if properly directed, to perform almost any practical operation in science or the arts? How long would it take this army of children, with a little aid, to furnish every lyceum, school-room, and parlour, in our land, with a beautiful collection of specimens, to show the riches and the wonders of creation? and by them, the power, the wisdom, and the goodness of their Creator? By so doing, what an acquisition would they make to the treasures of science! What vast resources of wealth would they throw open, not only for their own future use, but for the present use of their fathers and other friends?

How soon could these four million of children perform with their own hands, aided and encouraged in the slightest degree by teachers, experiments in science, which would acquaint them with the most important laws of the material universe!

After closing the last sentence, we laid down our pen, to attend a Juvenile Concert, from which we have just returned, delighted, animated, and instructed. We are at the same time furnished with a most striking proof of the power of children, not only to entertain, but to instruct, persons of every age, while they achieve their own advancement both in science and the arts. In this case, seventy or eighty children afforded pleasure of a pure and elevated character to a large congregation of hearers and *spectators*.—They exhibited a knowledge, both of the *science* and the *art* of music, and by them gave a most gratifying proof of the immense power of the true *Lyceum principle*. The exercises by which they had apparently, in the course of three months, become perfectly familiar with many of the *principles* of music, and the *skill* of *practising* upon those principles, were eminently *social*; they were also *occasional*, semi-weekly, as we understand. Now, if children can, by a course of *semi-weekly social* exercises for three months, make such improvement, as to furnish both instruction and delight to a large concourse of ladies and gentlemen, as intelligent and refined perhaps as can be found in this country, what might they not do, if similar exercises upon various subjects were continued for a course of years, say from six to sixteen?

This subject so completely fills us with delight, that we regret that the want of room compels us to break off in the midst of almost a volume of thoughts that press upon us. We will leave it however only till the next Lyceum.

CHEMISTRY.

HEAT.

Every blacksmith has illustrated by a thousand experiments, one of the most important laws of heat, of chemistry, and of general science. The same law is illustrated by every housekeeper many times every day. The most careless observer of nature must have witnessed illustrations of the same law, in the daily operations before his eyes, in nature's great laboratory. To that law, or some of its results, every person in the world resorts daily for performing the most common operations. Men could not move, act, or live without it. Except for that, the whole animal and vegetable creation, every fish and insect, every tree, shrub, and flower, upon the face of the globe, would present but a lifeless existence, if indeed it could exist at all. Our whole earth, indeed the whole universe of God, would be but one dead mass of matter, destitute alike of beauty and utility.

Notwithstanding the innumerable and mighty results of this law of nature, it is so simple, that the child of three years old can learn and comprehend it. Indeed we can scarcely conceive of any thing more simple or easy to be understood.

If it is at once simple, useful and grand, acting a part, either directly or indirectly, in every motion of every being in the universe, why not teach it in the Lyceum, the school and the family? Why not give the farmer, the mechanic, every man, woman, and child, the pleasure and the practical utility of it?

As grand, as useful and as simple as this principle of nature is, not one to a thousand, or ten thousand of those for whom it was designed, have any knowledge of it. All may be, and undoubtedly are acquainted with a few individual facts coming under this principle; but few, very few, have any knowledge of the principle itself.

And what is this law of nature, it will be asked, which produces such mighty results, through the boundless dominions of our Creator? Why not inform us at once, without so much preaching about its importance, its simplicity, grandeur, &c. &c.? Why, our kind reader, if you will fill a vial with water, and place it before the fire, and examine it occasionally while it is heating, your own eyes will inform you what it is. You would be able to see whether the heat increased or diminished the bulk of water, whether the water rose higher or sunk lower in the vial, after it was heated, than before. Or, if you should take a rod of iron or brass, and heat it, you might tell, perhaps, whether it was made longer or shorter by heating. Or, if you should take a bladder partly filled with air, and hold it before the fire, you would see at once, whether the bladder was more or less distended, after heating than before, and of course whether the bulk of air was increased or diminished. There are a thousand things on which you might try the experiment, to ascertain whether heat made bodies larger or smaller. And if that fact can be fully ascertained, and its influence in the operations of nature known, it will bring to the mind and understanding of any one who perceives it, this interesting law of nature to which we refer.

And is there any difficulty in it? Cannot a little child look at a vial of water while it is heating, and see whether the water is made larger or smaller? Cannot a child tell which bulk of air is largest, one that completely fills or one that half fills a bladder, or any other vessel? When a blacksmith is heating a hoop to put upon a carriage wheel, can none but grey-headed philosophers tell whether the hoop is made larger or smaller? Cannot a juvenile philosopher understand it just as well as the most learned sage?—Cannot the child of six years old perceive the fact as well as the man of sixty? Cannot the farmer and the philosopher see and understand it equally well?

Now, our friends, especially our young friends, if you will examine this subject, and satisfy yourselves whether heat expands or contracts bodies, in the next Lyceum we will make some statements, and represent some apparatus, which you can use to give you farther information and satisfaction on that subject. And we are sure, the more you study it, and learn what blessings, and what wonders it performs for us, the more interesting you will find it, and the more you will be disposed to be acquainted with that, and many other laws, which an all-powerful Creator and a kind Benefactor has established for the happiness of us, and all the rest of his vast creation.

Dr. Spurzheim's Works.

The enterprise of Marsh Capen & Lyon, have furnished to the public, four volumes, from the labors of Dr. Spurzheim, since the death of the lamented author. Connected as they all are with the nature and the education of man, and coming from such a source, they must be deserving of a perusal, and a reperusal, of a careful study of every lover of his race.

The plan proposed by this learned and amiable philosopher, is first to go back to the original elementary powers of man, and then to enquire what are the most successful means for exercising and strengthening these powers, and to give them the greatest symmetry and harmony in their operations upon each other, upon the individual, and upon society.

This, and nothing short of this, is taking a whole view of man. By such and only such a course, can we understand fully or successfully the science of man, the education of man, or the happiness of man.

The subjects of these volumes are Phrenology, or the natural powers of man, 2 vols; the Natural Laws of Man, and Education, or the developement of those powers in conformity to those laws, ordained by their Creator for their regulation and happiness.

Composition.

Mr. R. G. Parker, of the Franklin School, Boston, has conferred a valuable service, upon families as well as schools, by a work he has prepared for exercises in composition. A part of his plan has been practised upon, both for the instruction and entertainment of children, before they were able to write. From these simple exercises fit for children six years old, the author has advanced very judiciously to those that are more difficult, or rather those that require more experience and judgment.

As children of six or eight years of age uniformly engage in the exercise of composition of an appropriate kind with pleasure, and young ladies or gentlemen sixteen or eighteen years of age, commence it with the greatest reluctance, it will be highly serviceable to parents, and teachers of primary schools, net less than to those of our higher seminaries, to be furnished with this useful family and school book.

METEOROLOGICAL JOURNAL

FOR JANUARY, 1833.

Hours of Observation, 7, A. M., and 2, P. M.

Days Month.	Winds. 7	Winds. 2	Ther. 7	Ther. 2	Barometer. 7	Barometer. 2	Weather. 7	Weather. 2
1	SW	SW	49	54	30.000	29.874	Rain.	Rain.
2	NW	NW	34	40	30.320	30.336	Fair.	Fair.
3	NE	NE	34	39	30.378	30.296	Mist.	Cdy.
4	SW	SW	41	59	30.196	30.006	Cdy.	Pl'nt.
5	SW	SW	52	65	29.972	29.886	Do.	Do.
6	SW	SW	45	60	29.762	29.620	Damp.	R'n.
7	SW	NW	35	35	29.700	29.700	Cdy.	Cdy.
8	NW		19		29.856		Fair.	
9	NW	NW	27	35	29.436	29.436	Snow.	Fair.
10	SW	SW	32	39	29.442	29.330	Cdy.	Rain.
11	NW	NW	19	15	29.312	29.480	Cdy.	Fair.
12	NW		10		29.850		Fair.	
13	W	SW	14	30	30.008	29.892	Fair.	Fair.
14	W	W	22	40	29.598	29.510	Fair.	Fair.
15	NW	NW	3	20	30,128	30,110	Fair.	Fair.
16	SW	W	45	44	29.098	29.144	Snow.	Fair.
17	NW	NW	10	15	30.500	30.110	Fair.	Fair.
18	W	W	23	31	29.908	29.846	Cdy.	Fair.
19	NW	NE	2	13	30.370	30.426	Fair.	Cdy.
20	S	SW	23	39	30.200	29.096	Cdy.	Cdy.
21	NE	SW	34	50	29.856	29.766	Cdy.	Cdy.
22	NE	NE	32	37	29.754	29.788	Foggy.	Do.
23	NE	NE	34	36	29.930	29.932	Foggy.	Rain.
24	NE	NE	35	40	29.934	29.850	Wet.	
25	NE	N	35	34	29.698	28.994	Snow.	Wet.
26	NW	NW	30	27	29.410	29.620	Cdy.	Fair.
27	SW	SW	21	33	30.006	29.966	Fair.	Fair.
28	SW	NW	30	33	29.770	29.748	Cdy.	Fair.
29	NW		13		30.154		Cdy.	

Boston, January, 1833.

New-Year's Offering.

The State Temperance Society for New York have presented a rich offering to the schools of that State under the above title, and issued it as an extra to the Temperance Recorder. It is a quarto circular of 24 pages, and filled with matter of a most interesting and important character. But we are not able now to mention even the subjects which we intend doing hereafter. We avail ourselves however, of an extract, which exactly answers an object we were in pursuit of, on the subject of Meteorology, which we are glad to find numerous journals have been taking up within a few weeks or months past. As co-operation is the watch word of Lyceums, and appears to be becoming the order of the day, we hope that our public journals will co-operate with each other, and schools and individuals with them, on this interesting but dark subject.

Temperature, &c.

A mass of interesting facts on this subject has been obtained, in consequence of the regents requiring annual meteorological reports from the academies under their care. These academies are situated in every part of the state; and the mean temperature of the whole thus furnishes an approximation towards the actual state of thermometric heat.

In 1826 the mean temperature of ten places, reporting complete annual tables, was	49.38
1827 the mean temperature of eighteen places was	46.48
1828 the mean temperature of twenty-four places was	49.50
1829 the mean temperature of twenty-eight places was	46.45
1830 the mean temperature of thirty-four places was	48 15
Mean of the five years,	48.00

The quantity of rain and snow has been ascertained in a similar manner. Thus,

	[Inches.
In 1826 the mean rain and snow of nine places was	36.34
1827 the mean rain and snow of seventeen places was	44.29
1828 the mean rain and snow of twenty-five places was	36.74
1829 the mean rain and snow of twenty-five places was	34.88
1830 the mean rain and snow of thirty-two places was	38.86
Mean of the five years,	38 22

The highest degree of temperature noticed in these tables is + 104, at which the thermometers stood in the Montgomery academy, county of Orange, July 20, 1830. Its latitude is north 41° 32′, and longitude west 74° 10′. The lowest degree noticed—33, at which the thermometer stood in Lowville academy, county of Lewis, January 31, 1830; north latitude 43° 47′; west longitude 75° 33′. The thermometric range is thus 137°. The state is, in general, very healthy.

Juvenile Concert.

By the liberality of one of our citizens, F. T. Gray, Esq. Mr. Kingsly, a most accomplished teacher in music, was employed to instruct a class of children, pupils of the Hancock Sabbath School, from six to twelve years of age, for one quarter. The results of this instruction were exhibited to a large and highly intelligent assembly of ladies and gentlemen on Wednesday evening last, in the church of Rev. Mr. Emerson, of this city.

We speak with confidence when we say, that every man, woman and child, present on the occasion, received a rich entertainment of instruction and delight.

We are happy to learn, that a loud call is made for a repetition of the concert, which we hope will be answered in some more central place.

Comparative Meteorology.

It is evident that various comparative views may be taken of the weather and of the atmosphere generally, highly interesting to the curious and calculated to give some more definite knowledge of this medium and agent of numberless operations connected with every living thing. A comparison may be made of different parts of our globe for the same year, month, day and hour and also of the same places on different years, months and hours.

To obtain these comparative views, however, tables must be kept something upon the same plan. They ought, if possible, all to be kept, so that the mean temperature, and the mean height of the barometer, &c. can be given. It would also be convenient, to have observations made and minutes taken, at the same hours of the day, so that a comparison could be made at different places, at 7, 2 or 9 o'clock, for example, or at some other hour.

If the New York Lyceum, the American Lyceum, or some other society, would digest some plan, and propose it to our public Journals, to literary institutions and to the lovers of science generally, we cannot doubt but it would be extensively adopted. For one we would engage that the Family Lyceum, should lend the whole of its feeble aid to the cause. And we believe that many *Families* would gladly *co-operate* in an object, which would at once be a constant source of interest and instruction to their several members, and be a means for the general diffusion of knowledge and the advancement of science.

Africa.

Almost every day brings some new proof that the whole of Africa may be enlightened, civilized and christianized, through the medium of the colonies at Liberia and Siera Leon. The annual meeting of the American Colonization Society, recently held in Washington city, brought together a great concourse of people from all parts of the Union, and gave the most satisfactory evidence that the success and the prospects of the institution are greater and more animating at the present than any former period. Two hundred and forty seven slaves have been emancipated during the past year for the express purpose of removing to Africa.

Modern Dictionary.

Distant Relations—People who imagine they have a claim to rob you if you are rich, and to insult you if you are poor.

Heart—A rare article, sometimes found in human beings. It is soon, however, destroyed by commerce with the world, or else becomes fatal to its possessor.

Housewifery—An ancient art, said to have been fashionable among young girls and wives; now entirely out of use, or practised only by the lower orders.

Wealth—The most respectable quality of man.

Virtue—An awkward habit of acting differently from other people. A vulgar word. It creates great mirth in fashionable circles.

Honor—Shooting a friend through the head whom you love, in order to gain the praise of a few others whom you despise and hate.

Marriage—The gate through which the happy lover leaves his enchanted regions and returns to earth.

Friend—A person who will not assist you because he knows your love will excuse him.

Wedded Bliss—A term used by Milton.

Doctor—A man who kills you to-day, to save you from dying to-morrow.

Lunatic Asylum—A kind of hospital where detected lunatics are sent by those who have had the adroitness to conceal their own infirmity.

Water—A clear fluid, once used as a drink.

Tragedian—A fellow with a tin pot on his head, who stalks about the stage, and gets in a violent passion for so much a night.

Critic—A large dog, that goes unchained and barks at everything he does not comprehend.

Jury—Twelve prisoners in a box to try one or more at the bar.

King's evidence—A wretch that is pardoned for being baser than his comrades.

Sensibility—A quality by which its possessor, in attempting to promote the happiness of other people, loses his own.

My Dear—An expression used by man and wife at the commencement of a quarrel.

BOOK OF NATURE.

THE USES OF REPTILES.

In a former part we noticed the indispensable necessity of *animals of prey*, and the bad consequences that must have inevitably ensued, had the whole of earth's various tenants been left to die a natural death, and their carcasses been left to rot unburied.

Amongst animals of this description we may undoubtedly reckon the race of Serpents: and whether we consider the fitness of their bodies for entering the dens, and caves, and holes of the earth, or their voracious appetites for such sort of food in common with reptiles of an inferior order, we must certainly allow that they are wonderfully adapted for the purpose. This, then may be one reason, and a very sufficient one too, for the formation of Serpents, that, besides helping to rid the earth of a vast number of the smaller noxious vermin, they find their way with the greatest ease into the most secret recesses of putrefaction, and destroy those noisome carcasses in a short period, to which the other large animals of similar tastes could not, by the peculiar structure of their bodies, have had access. The use of the Leech is also too well known to need description.

THE OCEAN.

——'And thou, majestic main!
A secret world of wonders in thyself!
Sound His stupendous praise, whose greater voice
Or bids you roar, or bids your roaring fall!

What a grand and magnificent spectacle does the Ocean present! Whether we view it when wrought up by fearful agitation into all the horrors of the tempest, when the blackness of darkness rides triumphant on the storm, and its foaming billows mix with the clouds, or gaze upon it, with a calm delight, as it gently advances or recedes in soft and hollow murmurs upon the sandy beach, when not a breeze is observed to breathe on its undulating bosom, and every wind is hushed, it is impossible to conceive any thing better calculated to excite in us lofty and sublime conceptions of the Creator.

'May not the sea,' in the words of a modern author, 'be styled the temple of contemplation?' Viewed in all its stages, it exalts and improves the mind. Its level expanse, when a calm prevails, communicates a similar tranquillity to the reflecting breast; and when its billows lift their devouring heads, they suggest ideas the most sublime, meditations the most solemn. The very nature of the prospect, boundless and unbroken, presents a sensible argument for eternity of duration and infinity of space, more forcible than the subtilest reasoning of metaphysics.'

The ocean rolling its surges from clime to clime, is undoubtedly the most august object under the whole heavens. A spectacle of magnificence and grandeur which fills the mind, and engrosses the utmost stretch of imagination.

What an immense and mighty assemblage of watery particles must be contained in the great deep, and what a prodigious extent of the earth's surface doth it cover! Some natural philosophers indeed have carried their ideas on this subject so far as to assert, that if the bed of the sea were empty, all the rivers of the world flowing into it, with a continuance of their present stores, would at least take eight hundred years to fill it again to its present height.—If then in a single drop of water, as much only as will adhere to the point of a needle, a philosopher has computed no less than 13,000 globules, what an inconceivable number must there be in the unfathomable depths, and unmeasurable extent of the ocean! where the eye is lost in wandering over the liquid expanse, and which, if we look upon a map of the world, we shall find to cover a considerably larger portion of the surface of the globe than even the dry land itself. Wonderful as the sea is in itself, and beneficial as it is to the sons of men, all its wonders and all its benefits reflect glory to Him who formed it, and poured it abroad. When we place ourselves upon the shore, and from thence behold that immense body of waters, stretching away on all sides, as far as the eye can reach; and when we consider how large a portion of the globe is covered in like manner, what a noble idea are we enabled to form of that Being, who taketh up the sea in his hand, and in whose sight the ocean is no more than a drop! who covered the earth with the deep as with a garment, and assigned it bounds which it cannot pass!

And it is truly astonishing by what simple, yet potent means, this great and important end is accomplished, for it is neither by adamantine rocks nor tremendous precipices, nor shelving banks of well-cemented sand, that the unruly element is confined within due limits, although these all no doubt lend their aid in repelling the lashings of its surges, and occasional attempts to encroach on the land; but by a barrier simple, yet more effectual than all these, the word of the great Jehovah's strength: who has impressed upon this element that law of gravitation, by which the waters of the mountains are made to go down into the valleys; and has said to the fluctuating and unstable mass, 'Hitherto shalt thou come, and no farther: and here shall thy proud waves be stayed.' There are, however, some shores on which the sea has made temporary depredations; where it has overflowed, and after remaining, perhaps, some ages, has again retired of its own accord, or been driven back by the industry of man; but we have an instance of one of a very considerable and lasting nature, which happened in the reign of Henry I. in which the sea overflowed the estates of Earl Goodwin, in Kent, and formed that celebrated bank now called the Godwin Sands. In the reign of Augustus, the Isle of Wight also made a part of Britain, so that the English crossed over to it at low water with cart-loads of tin; and in the bay of Baiæ, near Naples, there are remains of houses and streets still visible below the present level of the sea. These, however, may have been occasioned by some earthquake or other internal convulsion of the earth, in which case such tracts would no doubt have sunk, although they had been situated more inland; or if these facts must be really considered as evidences of the encroachment of the sea upon the land, as the advocates for that theory insist, we must bring in the testimony of the Norway fishermen to balance them, who affirm, that the sea upon that coast has become much shallower in many places than it had been, that rocks, formerly covered with water, were now several feet above the surface of the sea, and that loaded vessels used formerly to ride where pinnaces and barks could now with difficulty swim; as nothing is more certain from the absolute necessity that a proper equilibrium in the disposition of the waters of the ocean be kept up, that if the sea is suffered to gain upon the land in one direction, it must recede from it in another, and *vice versa*.

Indeed, so far from there being the smallest danger that the world of waters may escape from its present situation, and return again to cover the earth, that it might rather be expected, from its known properties and penetrating quality, that it would find its way downward, so as to leave its banks dry by receding from our shores, or, by mixing with the internal composition of the globe, saturate its stores with the exuberance of its moisture. Whether the former of these is chiefly prevented by that other law impressed upon fluids, by which they have a natural tendency to regain their level, and the latter by that stiff tenacious coat of clay which covers such a considerable portion of the bottom of this universal canal, we will not take upon us to say; one thing is certain, that as no increase is observed on the waters of the ocean, notwithstanding, as the wise man observed, *all the rivers flow into it*, so neither is there any sensible diminution of that extent of surface so essentially necessary in the business of evaporation, which is continually going on from this great natural reservoir. The water of which the clouds are formed, and which descends in rain or snow, is evaporated from the sea, and it has been found by calculation, that in a summer day, there may be raised in vapors from the Mediterranean alone, no less than 5280 millions of tuns of water. The air and sun are the mighty engines which work without intermission, to raise the water from this inexhaustible cistern. The clouds as aqueducts, convey the genial stores along the atmosphere, and distribute them in seasonable and regular proportions through all the regions of the globe.

A superficial observer may be apt to imagine, that if the watery element had been less copiously diffused, and more confined to a deeper bed, a greater part of the earth might have been converted into dry land, and consequently, made habitable to a larger portion of the human species; but such do not consider, that the clouds which drop down fatness, derive their fertilizing quality from the vapors exhaled from the ocean, and that to abridge the liquid expanse of its extent, would be only depriving those aerial water-bearers of part of their genial stores, so indispensably necessary to render that portion of the dry land we already possess productive. How amazing that water, without which we can scarcely perform any business, or enjoy any comfort, should be thus brought to stream by our doors, and enter our houses from the remotest regions—from the far off and unfrequented paths of the great deep; that this boundless mass of fluid salt, so intolerably nauseous to the taste, should be the original source of those sweet and pleasing showers that descend to water and refresh the earth.

The all-wise Creator foresaw this, and in mercy to the inhabitants of the dry paths of this earthly ball, diffused his watery treasures over such a considerable portion of its surface; carefully balancing the Atlantic with the Pacific, and the Northern with the Southern ocean; and if the old Continent can boast of its Mediterranean, Caspian, Baltic, Black, White and Red seas, the New World is deeply indented by the gulf of Mexico, and North America has obtained the appellation of the Country of Lakes.

But the ocean, as well as being the source of fertility, by the exhalations drawn up from its surface by the sun, is also the great receptacle of filth, and mighty purifier and restorer of nature. Almost all the rivers indeed run into the sea; but it is not merely to empty their liquid stores, and to keep up the circulation in the huge machine of the universe; they convey also, as they go along to this capacious receiver, the refuse of nations, and deposit in the bosom of the great abyss, the accumulated filth of our towns and cities. How then, it may be asked, are the waters of this mighty basin preserved from being contaminated? And instead of continuing the salubrious element of vitality to so many living creatures, how comes it to pass that the sea is not converted into a source of corruption, a fountain of putridity, disease and death?

The two great efficient causes, which produce these happy results, are, that *incessant motion* by which the ocean is kept in perpetual agitation, even in its most tranquil state, and the *saltness* of its waters; and that these might operate with the greatest possible effect where most necessary, it is wisely so ordered that both prevail most as we approach those warm regions, where the intense heat would be followed by most pernicious consequences on a standing pool or stagnant fresh-water lakes, and are less perceptible in climates more remote from the equator.

The principal currents of the ocean are those observed in the Atlantic Ocean, near Guinea, extending from Cape Verd to the Bay of Fernandes. These currents are so rapid, that vessels run as far in two days with them, as require six or seven weeks to return.

Near Sumatra, there are rapid currents, as also between Java and Magellan, the Cape of Good Hope, and the island of Madagascar; especially between Natal and the Cape on the Const of Africa; there are violent currents in the sea, adjacent to the Maldivian Islands.

One of the greatest tides we know of, is that at the mouth of the river Indus, where the water rises thirty feet in height; it is no wonder, therefore, that Alexander's soldiers, who had been accustomed to behold the scarcely perceptible risings of the Mediterranean, should have viewed this striking phenomenon with a mixture of curiosity and apprehension. The tides are also remarkably high on the coasts of Malay in the Straits of Sunda, in the Red Sea, and along the coasts of China and Japan.

The sea contains the greatest quantity of salt in the torrid zone, where, otherwise, from the excessive heat, it would be in danger of putrefaction; as we advance northward this quantity diminishes, till at the Pole it nearly vanishes altogether.

It may also be remarked, that the Caspian and other inland seas, that have no effluent rivers to put them in motion, and circulate their contents, are salt; while the Lakes of Ontario and Erie, through which the river St. Lawrence passes, in North America, are fresh-water lakes.

We have already had occasion to remark the effects that must have inevitably ensued, had the putrid carcasses of land animals been left to rot in air unburied, but what must this mighty receptacle of carrion and putrefaction have long ere now become, but for the correcting and renovating power imported to it by its saltness and motion.

And it ought here to be remarked, that from whatever cause the saline nature of the ocean may proceed, its salt is as inherent in its composition as the heat is in the sun; while to preserve and keep up the perpetual agitation of its fluid particles, its motion is not dependent on any one single cause.

The most perceptible agitation in this world of water that strikes our senses, is that occasioned by the influence of the *wind*, when the raging billows heave with tumultuous throes, and threaten destruction to the affrighted mariner; yet this motion, even in the most violent storms, is said to be confined only to its surface. That occasioned by the *currents*, however, must descend to the bottom, and be particularly strong among those narrow and deep inequalities most apt to produce them. The bottom of the sea, like the surface of the earth, is overspread with mountains, intersected with inequalities. In all mountainous places currents will be violent; in all places where the bottom of the sea is level, they will be almost imperceptible.

Whirlpools appear to be no other than the eddies of the water formed by the action of two or more opposite currents. The Euripus, nigh the Grecian coast, and famous for the death of Aristotle, alternately absorbs and rejects the waters seven times in twenty-four hours. The Charybdis, near the straits of Sicily, rejects and absorbs the water thrice in twenty-four hours; and the greatest known whirlpool in the world, that in the Norway sea, which is affirmed to be upwards of twenty leagues in the circumference, is said to absorb for six hours, whales, ships, and every thing that comes near it, and afterwards returns them in the same quantity of time as it drew them in.

But that which gives to the sea its unremitting and universal impulse, which suffers it not to rest for a single moment over all its wide-extended bounds, but keeps it in perpetual agitation, and makes it as it were remain vigorous, and acquire health by exercise, from one extremity of the earth to the other, is that wonderful and truly surprising phenomenon of nature, the flux and reflux of the *tides*.

This wonderful phenomenon, so inconceivable to the ancients, is accounted for by the moderns, on the principle of gravitation, and has been demonstrated to be under the influence of the moon; but, from whatever secondary cause it may proceed, there can be no doubt as to the fact, that the waters of the sea ebb and flow alternately twice in the course of something less than twenty-five hours, with the greatest regularity. This is surprising indeed; but it is no less so, that they should adhere so invariably to the *limits* of their operation; that even when the waves lift up their heads in the most ungovernable fury, and toss about in their most frantic ravings, they still confine themselves to the space allotted for them by Providence, and pay the most implicit submission to that unerring law which regulates their movements.

QUESTIONS ON LYCEUM No. 24.

From whom did Alexander the Great receive the principal part of his education?

When was the preceptor of Alexander born, and where did he live?

At what place and under whose instruction did Aristotle study philosophy?

What did Philip the father of Alexander do out of respect to the preceptor of his son?

In what places were the principles of Aristotle adopted after his death?

To what height would the contractions of the heart raise the blood in an upright tube?

Of what substances are arteries composed?

Can an artificial pulsation be produced after death?

Where are *Lyceum Schools* most important, in large or small towns?

For whom is it most important that Lyceum schools should be established, those living in the centre or those in extremities of towns?

Would Lyceum schools probably be confined to children, and youths, or would adults, and even married people, be likely to attend?

Is it possible to establish a system of daily instruction, which will meet the wants of children in small and new towns?

If a system of weekly instruction should go into general operation through the country, how many teachers would be required to sustain it?

Where would young men be likely to get the best support and be most useful, in weekly or daily schools?

What is the first important step to be taken to establish Lyceum Schools?

How many acres of land are to be appropriated to the advancement of education in the 'Western Valley?'

In what way are those lands applied for the advancement of education?

In what way can the school lands of the west be appropriated, so as to be most productive?

What are some of the schools in the country which have entered into a system of co-operation with other schools for the general advancement of education?

What subjects are to be illustrated at the teachers' convention in Andover, in March and April next?

What opportunities will those who attend it have for experimental knowledge to prepare them to become school agents and circuit or Lyceum teachers?

What was the mean temperature of the atmosphere at Medfield for the year 1832?

Is that higher or lower than the common mean temperature for Massachusetts?

What is the price of coal at this time in the city of New York?

Who can with the greatest ease, and most effectually, present the subject of *Lyceum Buildings* to the public?

What would be some of the advantages of having Lyceums erected in all the towns and villages throughout the Union?

Could any more convenient buildings for town houses be provided?